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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/024,130	12/17/2001	Donna Stevens	2148US	3119
22881	7590	10/20/2004	EXAMINER	
Icoria, Inc. 108 T.W. ALEXANDER DRIVE P O BOX 14528 RTP, NC 27709-4528			NASHED, NASHAAT T	
			ART UNIT	PAPER NUMBER
			1652	

DATE MAILED: 10/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/024,130

Applicant(s)

STEVENS ET AL.

Examiner

Nashaat T. Nashed, Ph. D.

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 27 July 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2,3,5-16,20-29 and 31-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2, 3, 5-16, 20-29, and 31-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

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The application has been amended as requested in the communication filed July 27, 2004. Accordingly, claims 1, 4, 17-19, 30, and 40-49 have been canceled, and claims 2, 16, and 29 have been amended.

Claims 2, 3, 5-16, 20-29, and 31-39 are pending and under consideration.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 3, 5-16, 20-29, and 31-39 are rejected under 35 U.S.C. 103 as being unpatentable over Robinson (U. S. P. 5,589,372) in view Wolf *et al.* (Analytical Biochemistry, Jan. 1991, 192 (1), 78-81), Nakashima *et al.* (Proc. Natl. Acad. Sci. U. S. A., March 1992, 92, 2328-2332), and the state of the art as exemplified by the cited references, and Ciosek *et al.* [J. Biol. Chem. November 1993, 268 (33), 24832-24837] for the reasons set forth in the prior Office action mailed January 29, 2004.

In response to the above rejection, applicants argue that the examiner has not established *prima facie* case of obviousness because the prior art does not disclose that inhibitor of squalene synthase can be used as herbicides, and one of ordinary skill in the art.

Applicants arguments filed July 27, 2004 have been fully considered, but they are found unpersuasive. It is true that the use of inhibitors of squalene synthase as herbicides is not disclosed in the cited prior art. While the motivation of the applicants to devise the assay method may have been indeed to identify inhibitors for squalene synthase to be used as herbicides, one of ordinary skill in the art would have had other reasons at the time of invention to develop the claimed method, in particular, for **plant** squalene synthase. Robinson teaches that cells [including plants cell] containing inactivated copies of squalene synthase coding region may be advantageous in over production of numerous mevalonate-derived non-sterol isoprene compounds that are produced at only moderate levels in wild-type. He specifically identifies the benefit of having diminished activity of said synthase in tobacco and rubber producing plants, see column 5, lines 37-52. Natural rubber and tobacco are commercial products, and any prospect of increasing isoprenoid related products such as rubber would have highly motivated one of ordinary skill in the art to identify potent inhibitor of squalene synthase in order to treat rubber plants with the inhibitor and increase the production of natural rubber from rubber plants. Although Robinson teaching is directed to a genetically

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engineered cell, the teaching is clearly directed toward reducing or eliminating squalene synthase activity found in plants, which can be accomplished by inhibitors. Thus, the prior art provides motivation to one of ordinary skill in the art to develop an easy assay method amenable to automation to use in a method for screening potential inhibitor. Also, Robinson provides the expectation of success to one of ordinary skill in the art because of his teaching cited above. Again similar to the motivation, the ordinary skilled in the art at the time of invention may have other reasonable expectation of success that differs from that of the applicant. Finally, the oxidation-reduction reaction involving NADH/NAD or NADPH/NADP is well known to be accompanied by a large change in its optical properties (UV/vis light absorption and fluorescence). Since the examiner has met his burden in establishing a *prima facie* case of obviousness, the claims remain rejected.

No claim is allowed.

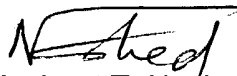
THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nashaat T. Nashed, Ph. D. whose telephone number is 571-272-0934. The examiner can normally be reached on MTTF.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ponnathapura Achutamurthy can be reached on 571-272-0928. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Nashaat T. Nashed, Ph. D.
Primary Examiner